

TO: COMMITTEE ON PUBLIC WORKS AND SUSTAINABILITY

Councilmember Stanley Chang, Chair
Councilmember Ann H. Kobayashi, Vice Chair
Councilmember Tom Berg
Councilmember Tulsi Gabbard
Councilmember Nestor R. Garcia

LOCATION: REGULAR MEETING COMMITTEE MEETING ROOM

DATE: WEDNESDAY, APRIL 4, 2012

TIME: 1:00 P.M.

FROM: Down to Earth ALL VEGETARIAN *Organic & Natural*

RE: Bill 10 Relating to the use of bags provided to customers.

Down to Earth ALL VEGETARIAN *Organic & Natural* submits for your consideration that **biodegradable plastic checkout shopping bags be added as an acceptable alternative to conventional plastic bags**. We have been using biodegradable bags for three years. We make this recommendation for several reasons.

Bill 10 currently exempts compostable bags, which makes no sense because ASTM D6400 requires that they be processed in an industrial-grade composting facility, which we don't have in Hawaii. In contrast, biodegradable bags from Down to Earth provide an environmentally sound solution because they meet all relevant ASTM standards for biodegradability, and they meet these standards using the infrastructure currently available in Hawaii.

Complete Biological Breakdown

The biodegradable bags used by Down to Earth are made using conventional plastic that includes an additive from ECM Biofilms, Inc, which allows plastic bags to completely break down completely into water, carbon dioxide, and harmless humus on land and in the ocean. This biodegradation process can take place with or without the presence of light or oxygen. These factors allow for biodegradation when buried in the ground or disposed in compost bins or landfills, which normally prevent degradation because they become air tight. These environmentally friendly bags completely biodegrade in 9 months to 5 years and, **unlike compostable bags, they can be recycled along with regular plastic bags**.

The ECM technology is based on a process that causes plastic films to completely biodegrade when they are exposed to microorganisms in the environment. This process continues until the plastic becomes part of the organic components of the soil, just like biodegraded sticks or other pieces of wood become part of the soil. This is what "biodegradable" means. There are no small pieces of plastic going into the soil. **These bags are produced locally**, by Island Plastic Bags, Inc., Aiea, and distributed by Triple F, Honolulu.

The relevant ASTM Standards for biodegradability met by Down to Earth's biodegradable bags are:

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- ASTM D5338-98 Standard Test Method for Determining Aerobic Biodegradation of Plastics Materials under Controlled Composting Conditions (equivalent to CEN prEN W1 Composting Conditions)
- ASTM 5511 Standard Test Method for Determining Anaerobic Biodegradation of Plastic Materials Under High-Solids Anaerobic Conditions
- ASTM D5209-91 – Standard Test Method for Determining the Aerobic Biodegradation of Plastic Materials in the Presence of Municipal Sewage Sludge

In addition, there's no oil used, no oil is going into the ground. Contrary to many critics who say that plastic bags consume oil resources, virtually all plastic bags are made out of polyethylene, which comes from ethane that is extracted from natural gas. There is no oil to begin with, and no oil going into the environment from plastic bags.

And there's no toxic residue. Tests by independent laboratories concluded that the films treated with the additive used in the bags from Down to Earth (1) biodegrade as claimed and (2) produce NO toxic residue harmful to living organisms in land or water. We will gladly provide copies of the reports. Just let me know if you'd like to have them.

The beauty of all this is that we now have an environmentally sound solution to the plastic-bag dilemma using the most cost-effective biodegradable plastic technology available today. These bags cost only a couple cents more or less per bag, depending on the size of the bag, so we can absorb the cost. It's a win/win solution for business and consumers alike.

As a point of interest, we respectfully submit that that ***paper bags are worse for the environment.*** Many people instinctively assume they are better for the environment because their core ingredient is derived from wood, which is a natural and renewable product. But it takes more than four times the energy to manufacture a paper bag as it does a plastic one. And, it takes more energy to ship them in because paper bags are considerably heavier than plastic. In addition, millions of gallons of toxic chemicals used to make paper each year pour into waterways, settling into sediments and working their way into the food chain. Or, they shoot up smoke stacks and contribute to air pollution such as acid rain. The wood industry is also responsible for clear-cutting old growth forests and adding to the problems of deforestation.

Therefore, the truly sustainable environmentally sound solution to the plastic bag dilemma is to embrace the best biodegradable technology available while encouraging people to re-use their bags. In so doing we will contribute to a cleaner and safer environment. Allowing biodegradable bags will be an important contribution to this goal.

Thanks for every consideration.

Mark Fergusson, Chief Vegetarian Office (CEO/CVO)
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